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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,149	10/08/2003	Per G. Akermalm	1148U101	5068

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EXAMINER	
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ART UNIT	PAPER NUMBER
2861	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H·A

Office Action Summary	Application No.	Applicant(s)	
	10/680,149	AKERMALM, PER G.	
	Examiner	Art Unit	
	Anh T.N. Vo	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-4,9,11-15 and 17-20* is/are rejected.

7)☒ Claim(s) *5-8,10 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/08/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgement is made of the receipt of Preliminary Amendment filed 3 March 2004.

Information Disclosure Statement

The references cited on PTO 1449 have been considered.

Specification and Drawings

The specification and drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification and drawings.

Claim Objection

Claims 1-9 and 11 are objected to because of the following informalities:

* In claim 1:
  - line 3, --and-- should be inserted after "ink".
  - line 8, "cartridge" should be changed to --inner part ink--.
  - line 9, --means-- should be inserted after "tubing".
  - line 10, "its" should be changed to --a--.
* In claims 2-9 and 18-19, line 1, --system-- should be inserted after "supply".
* In claim4, line 3, "container" should be changed to --cartridge--.
* In claim 5, line 3, "the" should be changed to --a--.
* In claim 8, line 2, "and said ink container" should be deleted.
* In claim 11, line 1, "of supplying" should be changed to –supplying to--.

The above change was made to avoid lacking of an antecedent basis problem and non-consistent and ambiguous language. Appropriate correction is required.

CLAIM REJECTIONS

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 USC 102 (b) as being anticipated by Hattori et al. (US Pat. 4,429,320).

Hattori et al. discloses in Figures 7 and 9 an ink container for supplying ink to an ink jet type recording apparatus comprising:

- a print cartridge (63) having an inner part and holding a first quantity of ink and an inner part ink fill port (78) (Figure 7);
- an ink container (75) locatable outside said printer body for containing a second quantity of ink (Figure 7);
- tubing means (79) for transferring ink from said ink container (75) to said cartridge (63) via said cartridge fill port (78);
- said tubing means (79) extending out through said fill port of said ink cartridge (63) thereby fluidically connecting between said cartridge (63) and said ink container at its location outside the body of said printer (an ink container 75 disposes under a printer support 71 and there is no connection between the ink container 75 and the printer support 71) (Figure 7);
- whereby said ink in said cartridge (63) is supplemented by ink transferred from said ink container (75) (Figure 7);

- wherein the ink in the cartridge (63) is in fluid connection with the ink contained in the container (75) external to the inkjet printer (Figure 7);
- an ink bag (73) with an outlet (77) at a height below the inner part fill port (78) of the print cartridge (78) (Figure 7) and
- the ink container (75) is in a medium at a higher temperature than room temperature (because ink container 75 is disposed under an ink jet printer so during printing operation of the printer causes environment temperature higher than room temperature).

Claims 1-2, 9, and 17-18 are rejected under 35 USC 102 (b) as being anticipated by Childers (US Pat. 6,283,586).

Childers discloses in Figures 1-2 an ink container for supplying ink to an ink jet printing system comprising:

- a print cartridge (18) having an inner part and holding a first quantity of ink and an inner part ink fill port (54) (Figure 6c);
- ink containers (68) locatable outside said printer body (10) for containing a second quantity of ink (Figures 1 and 6c);
- tubing means for transferring ink from said ink container (68) to said cartridge (18) via said cartridge fill port (54) (Figure 6c);
- said tubing means extending out through said fill port (54) of said ink cartridge (18) thereby fluidically connecting between said cartridge (18) and said ink container (68) at a location outside the body of said printer (10) (Figures 1 and 6c);
- whereby said ink in said cartridge (18) is supplemented by ink transferred from said ink container (68) (Figure 6c);
- wherein the ink in the cartridge (18) is in fluid connection with the ink contained in the container (68) external to the inkjet printer (10) (Figures 1 and 6c);
- a fitting adapted to be inserted into the ink fill port (54) in the print cartridge (18) to allow the fluid conduit free passage (Figure 6c).

Claims 1-2, 9, 11-13, 17 and 20 are rejected under 35 USC 102 (b) as being anticipated by Barinaga (US Pat. 5,721,576).

Barinaga discloses in Figures 1-13-14 an ink container for supplying ink to an ink jet printing system comprising:

- a print cartridge (20) having an inner part and holding a first quantity of ink and an inner part ink fill port (52) (Figure 2);
- an ink container (202) locatable outside said printer body (not shown) for containing a second quantity of ink (Figure 14);
- tubing means (204) for transferring ink from said ink container (202) to said cartridge (20) via said cartridge fill port (52) (Figure 14);
- said tubing means (204) extending out through said fill port (52) of said ink cartridge (20) thereby fluidically connecting between said cartridge (20) and said ink container (202) at a location outside the body of said printer (Figure 14);
- whereby said ink in said cartridge (20) is supplemented by ink transferred from said ink container (202) (Figure 15);
- a fitting (208) adapted to be inserted into the ink fill port (52) in the print cartridge (20) to allow the fluid conduit free passage (Figures 14-15);
- applying pressure to said ink in said ink container (202) whereby to cause said ink to flow from said ink container (202) to said ink cartridge (18) (column 2, lines 25-28 and column 14, lines 48-50);
- venting air from said ink cartridge (18) prior to admitting said make up ink thereto (column 6, lines18-29); and
- wherein said cartridge (18) has a flexible diaphragm (66) and including the steps of holding the cartridge so that any air inside the cartridge will be stored in the immediate vicinity of the cartridge ink fill port, and activating said flexible diaphragm (66) to pressurize the air, and turning the cartridge right side up to allow any air ingested into the cartridge to rise.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3-4, 11-16, and 19-20 are rejected under 35 USC 103 (a) as being unpatentable over Childer (US Pat. 6,283,586) in view of Taniwa (JP Pat. 61206660A); Oda et al. (US Pat. 6,264,318) and Arakawa (US Pat. 4,719472).

Childers disclose the basic features of the claimed invention were stated above but does not disclose ink containers are in the form of bags containing ink; an ink bag with an outlet at a height below the inner part fill port of the print cartridge; a bag support for supporting said bag at a height and attachable to the printer to support at least one ink bag fluidically connected to the ink cartridge; mass means on said bag to force the liquid ink; and the make up ink is heated.

Nevertheless, Oda et al. disclose in Figures 2-3 and 9-10 an ink jet recording comprising:

- ink containers (34 or 126) are in the form of bags containing ink;
- an ink bag (34 or 126) with an outlet (44 or 150) at a height below the inner part fill port of the print cartridge (20 or 120) (Figure 3);
- a bag support (30 or 122) for supporting said bag (34 or 126) at a height and attachable to the printer (110) to support at least one ink bag (126) fluidically connected to the ink cartridge (20 or 120) (Figures 3 and 9-10).

Furthermore, Taniwa discloses in Figures 1 and 4-5 an ink vessel for a recording apparatus comprising the ink container (2) is in the form of a bag and mass means (7, 8) on said bag (2) to force the liquid ink.

Additionally, Arakawa discloses 2 and 5 an ink supply for an ink jet printer comprising an ink container (40) supplying ink to an ink jet head cartridge (20) and the ink in the cartridge is heated by a heating resistor (27) (column 2, line 26-27).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Oda et al., Taniwa and Arakawa in the Childers ink jet printing system for the purpose of providing ink bags that are compressed to force ink out from the bags to supply ink to ink jet printing system and avoiding the viscosity of the ink increasing by heating the ink.

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art references (US Pat. 4,475,116; US Pat. 4,558,326; US Pat. 4,628,332; US Pat. 4,636,814; US Pat. 5,369,429; US Pat. 5,650,811; US Pat. 6,805,437) cited in the PTO 892 form show an ink supply system that is deemed to be relevant to the present invention. These references should be reviewed.

Allowable Subject Matter

Claims 5-10 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. These claims would be allowable because none of the prior art references of record discloses an expanded ink supply system for an inkjet printer comprising an ink container is in the form of a bag and wherein the bag is adapted to be inserted underneath the inkjet printer whereby to apply a mass of the printer to the bag for delivery of ink therefrom to an ink cartridge in the combination as claimed.

Claim 6 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. This claim would be allowable because none of the prior art references of record discloses an expanded ink supply system for an inkjet printer comprising means to structurally support and attach at least one ink container to a separate stand not attached to the printer in the combination as claimed.

Claims 7-8 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. These claims would be allowable because none of the prior art references of record discloses an expanded ink supply system for an inkjet printer comprising a support that is attachable to the inkjet printer by support clips, and including a cover removable placeable over the support in the combination as claimed.

Claim 16 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. This claim would be allowable because none of the prior art references of record discloses a method supplying to make up ink to an ink cartridge in an ink jet printer comprising steps of threading the fill port and screwing a connection fitting into the fill port in the combination as claimed.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 9:00 A.M.to 7:00 P.M..

The fax number of this Group 2861 is (703) 872-9306.

ANH T.N. VO
PRIMARY EXAMINER

May 25, 2005